BepiColombo Mission to Mercury

Contributors in clip: Professor David Rothery

Clip transcript:

David Rothery:
I'm David Rothery, Professor of Planetary Geosciences at The Open University, and I've been involved in the BepiColombo mission to Mercury for over 15 years now. It's a really exciting mission, because what we learned from the recent NASA mission – Messenger To Mercury – is that it's a planet that we don't understand! There's weird things there, its surface is rich in volatile materials, which shouldn't be the case for a planet that close to the Sun. We can tell it's volatile, we can see the surface has dissipated to space, we can see where there've been big volcanic eruptions, but we don't know what the volatile substances are – and that's one thing that the British-built instrument, the X-ray spectrometer from Leicester University, will help us understand.

Here at The Open University, we have several PhD students working on geological mapping, and just here is an in-progress geological map. That's one-fifteenth of the planet's surface, one of the mapping quadrangles in progress, and these maps like this are showing us the different units that make up the surface, and that will set the context for better observations that we'll get from BepiColombo when it starts sending science back to us, which will be some time in 2026, so there's a while to wait yet, but there's plenty of work still to do while we're preparing to get there.